



Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology
Commission technique mixte OMM-COI d'océanographie et de météorologie maritime
<http://www.jcomm.info>

JCOMM Technical Workshop on Wave Measurements from Buoys

2 - 3 October 2008, New York, United States

CONCEPT OF THE WORKSHOP

The JCOMM Expert Team on Wind Waves and Storm Surges (ETWS) has recommended that the network of in situ wave observations from moored and drifting buoys be enhanced, particularly for offshore locations and in the tropics and southern ocean. This is essential in order to provide more balanced geographical coverage, and therefore more representative statistics, for application in the following key areas:

- (1) assimilation into offshore wave forecast models;
- (2) validation of wave forecast models;
- (3) calibration and validation of satellite wave sensors;
- (4) ocean wave climate and variability; and
- (5) role of waves in coupling.

The 22nd Session of the Data Buoy Cooperation Panel (DBCP) in La Jolla, USA in October 2006 supported this requirement in principle, and updated its Implementation Strategy to encompass the development of appropriate cost-effective technology to meet this requirement. In order to enhance the wave measurement networks, the DBCP agreed to work with the ETWS to develop and implement a plan.

In addition, the 9th and 10th International Workshops on Wave Hindcasting and Forecasting (<http://www.waveworkshop.org>) identified several technical issues related to existing wave measurements from moored buoys, including differences in measured waves from different platforms, sensors, processing and moorings. In particular, a systematic 10% bias was identified between US and Canadian buoys, the two largest moored buoy networks. E-SURFMAR buoys have recently measured two occurrences of significant wave height greater than 17 m west of Ireland, including the highest wave ever measured by a buoy at 18.3 m.

As a result of these discussions, a two-day workshop on wave measurement will be held 2-3 October 2008 in New York City, United States.

The **objectives** of the workshop are:

- **to provide a forum for the exchange of ideas and information related to wave measurement from moored and drifting buoys, taking into consideration the users' requirements;**
- **to discuss priorities for the development of cost-effective wave observing technology and for extending the network of wave measuring buoys;**
- **to develop a technical work plan for implementation of enhanced global wave measurements, for consideration by the DBCP and its Action Groups.**

Potential participants are asked to note that the primary focus of the workshop will be the brainstorming of new technologies for wave measurement, with emphasis on the development and implementation of a wide network of low-cost sensors with stable and verifiable characteristics. The workshop will also be asked to recommend the establishment of suitable international frameworks for the pursuit of these activities. Please note that the workshop is not a training event.

The workshop is being organized jointly by the JCOMM Data Buoy Cooperation Panel and Expert Team on Wind Waves and Storm Surges. It is expected that there will be about 30 participants at the workshop, including representation from the DBCP and ETWS; national and regional wave monitoring agencies including the US National Data Buoy Center and US Army Engineer Research and Development Center, E-SURFMAR and Environment Canada; Ocean Sites; the International Association of Oil and Gas Producers; research institutes including the Scripps Institution of Oceanography; and buoy manufacturers. These participants encompass expertise in wave measurement technology, operational wave forecasting and hindcasting, wave climate, and observational systems, as well as users and providers of wave information.

The workshop will be comprised of a few keynote presentations from selected experts, plus in-depth discussion sessions focused on topics of significant interest including

- (1) requirements for wave observations;
- (2) existing technology and their limitations;
- (3) operational aspects;
- (4) potential for new cost-effective technology for drifters and moorings; and
- (5) workshop work plan.

The results of the workshop are expected to provide the basis for a discussion item at the 24th session of the DBCP on a technical work plan for implementation of enhanced spatial and temporal coverage of wave measurements on a global basis and assessment of existing and future wave measurement technology. The workshop is expected to recommend that the DBCP initiate a Pilot Project on wave measurements from buoys.

The Workshop will be held immediately following the fall meeting of the International Association of Oil & Gas Producers (OGP, <http://info.ogp.org.uk/metocean/>) Joint Industry Projects (JIP) week, including a meeting of the OGP Metocean Committee, at:

Hudson Hotel
356 W 58th Street
New York, NY

The Hudson Hotel is very centrally located in mid-town Manhattan within easy walking access to Lincoln Center, Times Square, the Theatre District, Central Park and the new Time Warner Center at Columbus Center.

Participants are responsible for making their own travel arrangements including hotel reservations. There are dozens of alternate hotels in the mid-town Manhattan area within one kilometer of the workshop location.

Please note that invited experts are asked to attend this workshop at their own expense.

A provisional program and list of participants are shown on the dedicated workshop web site (<http://www.jcomm.info/WaveBuoys>).
